

### **REMARKS**

Claims 2-5, 8-9, 11-12, 14-17, and 20-27 are pending in the application with the present amendment, including new claims 25, 26 and 27. In the Office Action, all claims were rejected under 35 U.S.C. §103 as being obvious over U.S. Patent No. 5,278,839 to Matsumoto et al. ("*Matsumoto*"), in view of U.S. Patent No. 5,748,543 to Lee et al. ("*Lee*"), and further in view of U.S. Patent No. 6,519,735 to Holman et al. ("*Holman*") and other cited references as indicated in the Office Action. For the reasons set forth below, Applicants submit that the presently pending claims are distinguished from the references cited by the Examiner. Reconsideration and withdrawal of the rejections are respectfully requested.

Claims 6-7 are canceled in favor of new claim 25. Claim 25 recites a method for identifying a failed memory element within an integrated circuit memory having a plurality of banks and for repairing the integrated circuit memory. A failed memory element is identified in one of the plurality of banks by storing data and ECC check bits to individual locations, retrieving data and ECC check bits from the locations and performing ECC processing.

In contrast to that described in any of the references cited in the Office Action, a repair is performed while the integrated circuit services memory access requests to banks other than the bank containing the failed memory element. Specifically, while a busy signal is asserted for the one bank, logic circuits are used within the integrated circuit to automatically replace the failed memory element in the one bank with a redundancy element. Memory access requests to banks other than the one bank are

serviced normally while the failed memory element is being replaced with the redundancy element.

None of the references cited by the Examiner teaches or suggests the presently recited method in which a failed memory element of one bank is repaired while memory access requests to other banks are serviced by the integrated circuit. *Matsumoto* merely describes a system capable of self-check and self-repair but which clearly does not repair a failed memory element in one bank while servicing memory access requests in another bank of the same integrated circuit. While *Lee* describes selection of a spare column to repair a semiconductor memory device which is in an active mode (col. 7, lns. 10-15), *Lee* neither teaches nor suggests asserting a busy signal for one bank of an integrated circuit memory and repairing a failed memory element in the one bank while access requests to other banks are being serviced. U.S. Patent No. 6,442,083 to Hotaka ("*Hotaka*") neither teaches nor suggests this feature of the presently pending claims. *Hotaka* merely describes asserting a "redundancy busy signal" when detecting a system reset signal or power-on reset signal. (col. 3, ln. 65 - col. 4, ln. 4). *Hotaka* does not describe a system which would permit memory access requests to some banks of an integrated circuit while repairing a failed memory element in one of the banks.

The remaining references merely describe circuits and methods which are not related to this defining feature of the presently claimed invention. Accordingly, Applicants submit that the present claims are fully distinguished over the references cited by the Examiner. Reconsideration and withdrawal of the rejections are respectfully requested.

Claims 8 and 26 contain similar recitations. The remaining claims which depend from Claims 8, 25 or 26 are allowable at least on the above basis.

Support for the present amendments is provided, *inter alia*, at p. 10, ln. 17 through p. 11, ln. 4 of the Specification.

If for any reason the Examiner has any question regarding the content of this amendment or the allowability of the presently pending claims, he is respectfully requested to contact the Applicants' undersigned attorney at the telephone number indicated below.

If any additional fee is required for submission of this amendment, authorization is given to debit the Deposit Account No. 09-0458 of the Assignee for the amount due. If there is an overpayment, please credit the same account.

Respectfully submitted,  
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